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/*GOPIKRISHNA V  
S3 CSE A  
52
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```
JAVA PGM TO FIND THE PRODUCT OF TWO MATRICES
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```
*/
```

```
import java.util.*;
```

```
public class matrixmulti  
{
```

```
    public static void main(String args[])  
    {
```

```
        Scanner sc=new Scanner(System.in);
```

```
        int row1,row2,col1,col2,i,j,k;  
        int matrix1[][]=new int[10][10];  
        int matrix2[][]=new int[10][10];  
        int product[][]=new int[10][10];
```

```
        System.out.println("Enter the row and column of the first matrix");  
        row1=sc.nextInt();  
        col1=sc.nextInt();
```

```
        System.out.println("Enter the row and column of the second  
matrix");
```

```
        row2=sc.nextInt();  
        col2=sc.nextInt();
```

```
        if(col1!=row2)
```

```
            System.out.println("Product of matrix not possible");
```

```
        else  
        {
```

```
            System.out.println("Enter the elements of matrix 1");
```

```
            for(i=0;i<row1;i++)  
                for(j=0;j<col1;j++)  
                {  
                    matrix1[i][j]=sc.nextInt();  
                }
```

```
            System.out.println("Enter the elements of matrix 2");
```

```
            for(i=0;i<row1;i++)  
                for(j=0;j<col2;j++)  
                {  
                    matrix2[i][j]=sc.nextInt();  
                }
```

```
            int sum=0;  
            for(i=0;i<row1;i++)  
                for(j=0;j<col2;j++)  
                {
```

```

sum=0;
for(k=0;k<row2;k++)
{
    sum = sum +
(matrix1[i][k]*matrix2[k][j]);
}
product[i][j]=sum;
}

System.out.println("PRODUCT OF MATRICES
\n-----\n");
for(i=0;i<row1;i++)
{
    for(j=0;j<col2;j++)
    {
        System.out.print(product[i][j]+" ");
    }
    System.out.print("\n");
}
}
}
}

```